# Profitability, Liquidity, Solvability, and Stock Price: Evidence from Consumer Goods Industry

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| Article Info | Abstract |
|---|---|
| | Fundamentally, the information from financial statements can be utilized to predict the stock price. Indeed, the information is its ratio covering profitability, liquidity, and solvability as the favorite ones. This research examines the tendency of three ratios toward stock price, where the population is from the Indonesian Capital Market-listed consumer goods companies between 2017 and 2021, and the eight samples are taken based on a purposive sampling technique. Because of five years, this study uses 40 observations. Furthermore, it tests the three hypotheses according to the regression model coefficients. In conclusion, this study demonstrates that profitability measured by return on equity and solvability quantified by debt to equity ratio positively affect the stock price. Meanwhile, the current ratio as the liquidity proxy does not influence this price. |
| Artikel Info | Abstrak |
| | Secara fundamental, informasi dari laporan keuangan dapat dimanfaatkan untuk memprediksi harga saham. Informasi tersebut adalah rasio yang meliputi profitabilitas, likuiditas, dan solvabilitas sebagai rasio yang paling diminati. Penelitian ini mengkaji kecenderungan tiga rasio terhadap harga saham, populasinya adalah perusahaan barang konsumsi yang tercatat di Pasar Modal Indonesia pada tahun 2017 sampai dengan 2021, dan terdapat delapan sampel diambil berdasarkan teknik purposive sampling. Penelitian ini menggunakan data selama lima tahun sehingga diperoleh 40 observasi. Selanjutnya, ketiga hipotesis diuji berdasarkan koefisien model regresi. Sebagai kesimpulan, penelitian ini menunjukkan bahwa profitabilitas yang diukur dengan return on equity dan solvabilitas yang diukur dengan debt to equity ratio berpengaruh positif terhadap harga saham. Sementara itu, current ratio sebagai proksi likuiditas tidak berpengaruh terhadap harga tersebut. |

## I. INTRODUCTION

The capital market enables investors to purchase the stocks the company offers for the first time, where the deal between the company and the underwriters determines the price. After that, the stocks are transacted in the secondary market, where the price is determined by supply and demand among public investors (Sunariyah, 2011). For capital market participants, the stock price reflects their wealth (Gitman & Zutter, 2015). Therefore, they try to get a positive return (Hartono, 2017). To get it, they can technically analyze the stock price movement by using charts based on historical patterns to indicate selling and buying signs based on moving averages, relative strength index (Jensen & Jones, 2019), Fibonacci retracement (Khan et al., 2022), Bollinger bands, and stochastic oscillator (Reswita & Aprilia, 2023).

Fundamentally, three techniques exist to predict the stock price. The first is the economic analysis focusing on the gross domestic product (GDP), interest, inflation, and exchange rate fluctuation. Secondly, the industrial approach emphasizes sales, earnings, regulation, and innovation in the same industry. Lastly, the company approach highlights information from financial statements (Husnan, 2015).

The output of the financial statements is their ratios, covering four primary ones: profitability, liquidity, activity, solvability, and market (Gitman & Zutter, 2015). According to Fahmi (2020), profitability, liquidity, and solvability are three common ratios to assess company performance. Therefore, this study uses these ratios to be associated with stock prices in the consumer goods industry. According to Kurniawan (2024), this industry contributes to economic growth because it can elevate the production, distribution, and revenue of related companies. Additionally, it can reduce unemployment and grow social consumption, leading to communal trust in domestic goods.

## A. Profitability and Stock Price

One of these profitability measurements is the return on equity (ROE) (Gitman & Zutter, 2015). ROE becomes the focus of public investors before buying stocks (Lilie et al., 2019). The high ROE indicates that more efficient managers generate after-tax earnings based on equity (Ratnaningtyas, 2021). Using ROE to measure profitability, Pongsupatt and Pongsupatt (2019) from Thailand affirm a positive tendency of ROE toward stock price. Similarly, Lilie et al. (2019), Leonatan and Yunior (2021), Ratnaningtyas (2021), Aini et al. (2023), and Andriani et al. (2023) affirm the positive evidence of ROE based on their research using the Indonesian capital market-listed companies. By mentioning these tidings, the first hypothesis is as follows.

$H_1$: Profitability and stock price have a positive relationship.

## B. Liquidity and Stock Price

One of the liquidity measures is the current ratio. This ratio demonstrates the ability of current assets to cover short-term debt that is about to mature (Gitman & Zutter, 2015). Companies with a high ratio can cover this debt with current assets (Samosir et al., 2019). Of course, public investors consider this tendency to be favorable; therefore, they purchase stock, leading to an increase in its market price, as Dang et al. (2018) and Aini et al. (2023) demonstrate, i.e., a positive tendency of the current ratio toward stock price. Based on these tidings, the second hypothesis is as follows.

$H_2$: Liquidity and stock price have a positive relationship.

## C. Solvability and Stock Price

One of the quantifications of solvability is the debt-to-equity ratio (DER) (Gitman & Zutter, 2015). If the debt is too high, the high interest expense will generate low after-tax earnings (Ratnaningtyas, 2021). According to the static trade-off theory, the more debt is utilized, the greater the financial distress (Brealey et al., 2020). Therefore, the investors sell their stocks, leading to a decrease in their price, as documented by Akhmadi et al. (2020), Ratnaningtyas (2021), and Fitriani et al. (2022): An inverse relationship between DER and stock price. By denoting these tidings, the third hypothesis is as follows.

$H_3$: Solvability and stock price have a negative relationship.

## II. METHOD

This study uses stock price as the dependent variable and profitability, liquidity, and solvability as the independent:

1. Following Dang et al. (2018), Lilie et al. (2019), Pongsupatt and Pongsupatt (2019), Akhmadi et al. (2020), Sari (2020), Leonatan and Yunior (2021), Ratnaningtyas (2021), Fitriani et al. (2022), Pangiuk (2022), Andriani et al. (2023), and Maulana and Prasetyo (2024), the end-of-the-year closing share price at is utilized.

2. Tracing Lilie et al. (2019), Pongsupatt and Pongsupatt (2019), Leonatan and Yunior (2021), Ratnaningtyas (2021), Andriani et al. (2023), and Maulana and Prasetyo (2024), this study uses the-end-of-the-year return on equity (ROE) at to quantify profitability.

3. Tracing Dang et al. (2018), Lilie et al. (2019), Sari (2020), Ratnaningtyas (2021), Pangiuk (2022), and Aini et al. (2023), the-end-of-the-year current ratio (CR) at is utilized to measure liquidity.

4. By mentioning Lilie et al. (2019), Akhmadi et al. (2020), Sari (2020), Leonatan and Yunior (2021), Ratnaningtyas (2021), Andriani et al. (2023), and Aini et al. (2023), the-end-of-the-year debt-to-equity ratio (DER) is employed to compute solvability.

The population of this investigation comes from enterprises in the consumer goods industry between 2017 and 2021, and the purposive sampling technique is utilized to sample them. According to Hartono (2014), this technique sets the criteria. In this study, the consistent companies with profits publishing the annual financial reports during this duration become the related criteria. In this situation, the names of the companies are (1) Indofood CBP Sukses Makmur (ICBP), (2) Indofood Sukses Makmur (INDF), (3) Kino Indonesia (KINO), (4) Ultra Jaya Milk Industry (ULTJ), (5) Delta Djakarta (DLTA), (6) Kalbe Farma (KLBF), (7) Nippon Indosari Corpindo (ROTI), and (8) Chitose Internasional (CINT).

Additionally, this study employs the regression model to estimate coefficients (β) and examine them, where the model is available in Equation 1.

Stock Price$_{it}$= $\beta_0$ + $\beta_1$ROE$_{it}$ + $\beta_2$CR $_{it}$+ $\beta_3$ DER$_{it}$ + $\varepsilon_{it}$
………………… (1)

Before estimating the coefficients, the virtuous regression must meet the classical assumptions, such as normality of error, homoskedasticity, no autocorrelation among errors, and no multicollinearity (Ghozali, 2021). By mentioning Ghozali (2021), this study uses a one-sample Kolmogorov-Smirnov, Glesjer, Durbin-Watson, and variance inflation factor to prove them, respectively.

## III. RESULT AND DISCUSSION
### A. Result
#### 1. Statistical Descriptions
Table 1 describes the statistics of eight consumer goods companies for profitability, liquidity, solvability, and stock price from 2017 to 2021. Based on this information, this study has 40 observations.

a) For return on equity (ROE), the minimum, maximum, average, and standard deviation are -28.1%, 26.33%, 12.1945%, and 9.492845. Meanwhile, the variance coefficient is 0.778.

b) For the current ratio (CR), the minimum, maximum, average, and standard deviation are 1.07, 8.64, 3.23825, and 1.951106. Meanwhile, the variance coefficient is 0.603.

c) For the debt-to-equity ratio (DER), the minimum, maximum, average, and standard deviation are 16.4%, 115.75%, 51.0013%, and 31.73279. Meanwhile, the variance coefficient is 0.833.

d) The minimum, maximum, average, and standard deviation for the share price are IDR240, IDR11,150, IDR3,655.93, and 3,229.289. Meanwhile, the variance coefficient is 0.622.

**Table 1.** Statistical Description Result

| Deter-minant | Min. | Max, | Average | Standard Deviation | Variance Coefficient |
|---|---|---|---|---|---|
| ROE (%) | -28.1 | 26.33 | 12.1945 | 9.492845 | 0.778 |
| CR | 1.07 | 8.64 | 3.23825 | 1.951106 | 0.603 |
| DER (%) | 16.4 | 115.75 | 51.0013 | 31.73279 | 0.622 |
| Stock Price (IDR) | 240 | 11,150 | 3,655.93 | 3229.289 | 0.883 |

#### 2. Classical Assumption Testing Results
The fulfillment of classical assumptions, i.e., normality and unavailability of heteroskedasticity, autocorrelation, and multicollinearity, is mandatory for the regression model to result in the best linear and unbiased estimators (Ghozali, 2021). Table 2 presents the normality testing result based on a one-sample Kolmogorov-Smirnov with a 2-tailed asymptotic significance of 0.174. This value is higher than the significance level ($\alpha$) of 5%; therefore, the normal unstandardized residuals exist, gratifying the normality assumption.

**Table 2.** Kolmogorov-Smirnov Testing Result

| Description | Residual |
|---|---|
| N | 40 |
| Z-statistic of Kolmogorov-Smirnov | 131 |
| Asymp. Sig. (2-tailed) | 0.174 |

Table 3 exhibits the heteroskedasticity testing result by the Glesjer technique with the probability of t-statistic for ROE, CR, and DER of 0.140, 0.865, and 0.377. Because these values exceed $\alpha$ of 5%, ROE, CR, and DER do not affect absolute residuals, indicating unavailable heteroskedasticity, fulfilling the no-heteroskedasticity assumption.

**Table 3. Glejser Heteroskedasticity Testing Result**

| Determinant | Probability |
|---|---|
| C | 0.467 |
| ROE | 0.140 |
| CR | 0.865 |
| DER | 0.377 |

Based on IBM SPSS output, the Durbin-Watson statistic is 1.763. Because this value is between the dL of 1.244 and the 4-dU of 2.350, the autocorrelation does not appear (Note: dL of 1.244 and dU =1.650 are obtained from Durbin-Watson Statistic significance level at 5% with 40 as the total observations and k of 3 as the number of independent variables). Table 4 describes each variance inflation factor (VIF) to detect multicollinearity: 1.244, 5.086, and 4.579 for ROE, CR, and DER, one-to-one. These values are below ten as its cut-off value required by Ghozali (2021).

Therefore, the multicollinearity is unavailable.

Table 4. The VIF for ROE, CR, and DER

| Determinant | VIF |
|---|---|
| ROE | 1.244 |
| CR | 5.086 |
| DER | 4.579 |

### 3. Estimation Result of The Regression Model

Table 5 displays the estimation result of the regression model. The probability of t-statistic for a positive coefficient of ROE, CR, and DER is 0.000, 0.2222, and 0.001:

a) The first and third hypotheses declaring a positive propensity of profitability and solvability toward share price are proven because the related probability of t-statistic is below $\alpha = 5\%$.

b) The second hypothesis exhibiting a positive propensity of liquidity toward share price is disallowed because the probability is above $\alpha = 5\%$.

Table 5. The Estimation Result of The Regression Model: SP = f(ROE, CR, and DER)

| Determinant | Coefficient | Standard Error | t-statistic | Probability |
|---|---|---|---|---|
| C | -0.421 | 1.726 | -0.244 | 0.809 |
| ROE | 1.112 | 0.183 | 6.073 | 0.000 |
| CR | 0.543 | 0.435 | 1.249 | 0.222 |
| DER | 1.356 | 0.377 | 3.600 | 0.001 |

### B. Pembahasan

This study accepts the first hypothesis, declaring a positive impact of profitability on stock price. This situation means that ROE can determine stock price because it demonstrates the efficient equity utilization to produce after-tax earnings. The higher the ROE, the more attractive the share is from the public investor perspective. Therefore, this result confirms Pongsupatt and Pongsupatt (2019), Leonatan and Yunior (2021), Ratnaningtyas (2021), Aini et al. (2023), and Andriani et al. (2023).

This study rejects the second hypothesis, declaring a positive impact of liquidity on stock price. Instead, it demonstrates the insignificant effect. This inclination occurs because the current ratio (CR), as the liquidity measure, has the smallest variance coefficient, i.e., 0.603, compared with ROE of 0.778 and DER of 0.622 (see Table 1). The slightest variance coefficient indicates that CR tends to be more unchanging when explaining the stock price. Hence, this evidence aligns with Lilie et al. (2019), Sari (2020), and Pangiuk (2022), stating the meaningless effect of the current ratio on the stock price. `

This study rejects the third hypothesis, declaring a negative impact of solvability on stock price. Instead, it shows a positive relationship. This situation indicates that DER can determine the stock price with an inverse tendency. According to Gitman and Zutter (2015), in the degree of total leverage context, interests of debt can enlarge earnings per share if the increasing revenue happens. Indeed, it will positively affect the stock price. Thus, this positive proof confirms Pangiuk (2022), affirming a positive relationship between DER and stock price.

Based on these facts, public investors should pay attention to ROE and DER when purchasing stocks to get capital gain. They are expected to purchase the shares when the trend of ROE, DER, and sales revenue increases yearly.

## IV. CONCLUSION AND SUGGESTION

### A. Conclusion

Ideally, financial ratios should affect the stock price. Hence, this investigation tries to prove three of them, i.e., profitability, liquidity, and solvability, by employing eight consumer goods companies listed on the Indonesian Capital Market from 2017 to 2021 through hypothesis examination. After performing it, this study reveals the positive propensity of profitability and solvability toward stock price.

### B. Saran

As a restriction, this study only employs a single industry from one country and three stock price determinates. Therefore, the following academics can still use the consumer goods industry by employing companies from the Southeast Asian capital market. Then, they are expected to add the fundamental factors to their research model, such as turnover ratios, firm size, economic growth, GDP, inflation, interest rate, and exchange rate of IDR/USD.

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